

## **EPA's Regional Vulnerability Assessment Program (ReVA): Demonstrating Results through Partnerships.**

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EPA's Regional Vulnerability Assessment (ReVA) program, a regional-scale comparative risk research effort, has been under development since 1998 with a pilot study focused on the Mid-Atlantic region. ReVA is part of the interagency Integrated Science for Ecosystem Challenges initiative that is focused on addressing broad-scale issues associated with land use change, resource extraction, pollution and pollutants, spread of non-indigenous species, and climate change. To date, ReVA has developed over 100 spatial coverages that depict the variability in resource condition, sensitivity, and current and future stressor distributions. In addition, we have developed new spatial integration methods and have evaluated both these new methods and traditional analysis methods with regard to data issues (skewness, imbalance, redundancy) and appropriateness for different assessment questions. A combination of regional-scale statistical and process models allow forecasting of the impacts of alternative management decisions along with insights into trends over which we have little to no control. Modeled results, spatial data coverages, and integration methods are all built into a web-based decision support system that allows flexibility in selecting and assessing different decision criteria.

ReVA is now putting into place client partnerships with regional, state and local organizations to further develop our tools such that they are useful to decision-makers, and to test the application of ReVA data and information at multiple scales. Our partnerships now include EPA Region 3, The Pennsylvania Department of Environmental Protection, the Maryland Department of Natural Resources, The Canaan Valley Institute (covering the Mid-Atlantic Highlands region), and Baltimore County Department of Environmental Protection. Within all of these partnerships it is expected that we will demonstrate the application of ORD research toward targeting of risk management activities and evaluation of management alternatives.

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